

1. A method for enhancing the confidence in detecting the presence of an analyte in a sample suspected of containing said analyte, said method comprising:

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7. A method for detecting the presence and/or amount of an analyte in a sample suspected of containing said analyte, said method comprising:

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(d) subjecting said ions to mass analysis and detecting a response therefrom
and

(e) determining the retention times of said ions and the ratios of the
intensities of said responses, said retention times and said ratios being related to the
5 presence and/or amount of said drug in said sample.

14. A method according to Claim 13 wherein said chemical ionization
comprises negative ion chemical ionization.

10 15. A method according to Claim 13 wherein said drug is a drug of abuse.

16. A method according to Claim 13 wherein said derivatizing agents are
selected from the group consisting of organic acids, organic acid anhydrides, amines,
alcohols, esters, organometallic compounds and complexing agents.

15 17. A method according to Claim 13 wherein said derivatizing agents
comprise at least one halogen moiety.

18. A method according to Claim 13 wherein said drug of abuse is selected
20 from the group consisting of alkaloids, steroids, lactams, aminoalkylbenzenes and
benzheterocyclics.

19. A method for detecting the presence and/or amount of a drug of abuse in
a sample suspected of containing said drug of abuse, said method comprising:

25 (a) combining said sample with at least two predetermined derivatizing
agents,

(b) subjecting said combination to conditions under which derivatives of said
analyte are formed,

(c) subjecting said derivatives to gas chromatographic separation to separate
30 said derivatives,

(d) subjecting said derivatives to negative ion chemical ionization to form
negative ions of said derivatives,

(e) subjecting said ions to mass analysis and detecting a response therefrom
and

(f) determining the retention times of said ions and the ratios of the intensities of said responses, said retention times and said ratios being related to the presence and/or amount of said drug in said sample.

5 20. A method according to Claim 19 wherein said derivatizing agents are selected from the group consisting of organic acids, organic acid anhydrides, amines, alcohols, esters, organometallic compounds and complexing agents.

10 21. A method according to Claim 19 wherein said derivatizing agents comprise at least one halogen moiety.

15 22. A method according to Claim 19 wherein said drug of abuse is selected from the group consisting of alkaloids, steroids, lactams, aminoalkylbenzenes and benzheterocyclics.

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